

U. S. Patent Application No. 10/613,208
Amendment Dated October 31, 2005
Response to Office Action Dated June 30, 2005

Remarks

In view of the following remarks, favorable reconsideration of the office action is respectfully requested. Claims 1-38 remain in this application.

1. §103 Rejections

The Examiner has rejected claims 1-38 under 35 U.S.C. §103(a) as being unpatentable for obviousness over U.S. Patent No. 5,821,513 to O'Hagan et al. ("O'Hagan") in view of U.S. Patent No. 6,034,379 to Bunte et al. ("Bunte") and U.S. Patent No. 5,880,452 to Plesko ("Plesko").

According to the MPEP §2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. All of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, MPEP §2143.03. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

According to the MPEP §707.07(d), **Improperly Expressed Rejections**, An omnibus rejection of the claim "on the references and for the reasons of record" should be avoided and a plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group.

Under 37 C.F.R. §1.104(c)(2) Nature of examination, Rejection of claims, In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes

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inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

A. This rejection is believed to be improper as an “improperly expressed rejection” in the form of an omnibus rejection as prohibited by MPEP §707.07(d). Contrary to this provision of the MPEP, the Examiner presents the rejection of claims 1-38 as a single free flowing list in a single paragraph, paragraph 4 of the current Office Action:

4. Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Hagan et al 5,821,513 and Bunte et al 6,034,379, and Plesko 5,880,452. O'Hagan discloses in figure 4 as described in column 6 line 20 — column 7 line 27, a scanning mechanism including a two dimensional photo sensing array 170 mounted on a circuit board 146. Also disclosed are illumination means 44 including LED's 180, targeting LED's 188,186 mounted on circuit board 146 which project targeting beams through an aperture in board 189. There is disclosed an image processor 120 mounted on the circuit board. As seen in the figure, the entire circuit board apparatus is enclosed and mounted within a housing including back and sidewalls 162. O'Hagan discloses that his elements are mounted on four circuit boards, not a single circuit board as claimed when interpreted in lights of applicants' disclosure. Bunte discloses in figures 19, and in column 28 lines 22+ an imaging module with an illuminator array 1947 and a sensor assembly 1949. It is disclosed in column 27 lines 35+ that the sensor assembly comprises a photo array 1929 that captures a 2-D image of the code being imaged. It is disclosed in column 27 lines 7+ that the illuminator is a LED array, i.e. a plurality of individual light sources. These LED's illuminate and therefore are functional to aim the imaging sensor. There are disclosed elements 1973,1975,1977,1979 for mounting the circuit board within the larger housing of the imaging sensor, i.e. framework and housing. There is disclosed a planar optical element as window 1919. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the illumination array of Bunte in the apparatus of O'Hagan. This would physically create a single “aiming” line upon which a user can rely upon for proper aiming and alignment of the combined apparatus. O'Hagan and Bunte do not disclose the single circuit board as claimed. Plesko discloses, as seen in figure 1, an optical scanner, with a single scanning line, and a planar window 11, in which all elements, including the scanning module, are “mounted” on a single circuit board. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount all the elements of an optical scanner on a single circuit board as taught by Plesko in order to achieve a thin geometry to fit within a circuit card body. O'Hagan, Bunte and Plesko do not specifically disclose the specific housing details as claimed of the “finger” mounting as claimed. Mounting “fingers” remain old and well known, as are “recesses” and alignment means in electronic equipment enclosing circuit boards. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the board of O'Hagan using mounting “fingers” and providing “recesses” for alignment in the housing of O'Hagan. This would reduce the cost of mounting while providing for a physically secure package.

Because of the nature of the improper omnibus rejection, there are few specific indications as to which claim the references cited by the Examiner are directed to. (*Office Action, paragraph 4*). The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (37 C.F.R. § 1.104(c)(2)). Since no claim numbers are given in the omnibus rejection, it is not clear what the pertinence of O'Hagan or

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Bunte or Plesko is. As presented by the Examiner, the rejection is again incomplete, vague, and impossible to reply to with any specificity. Therefore, applicants are unable to positively correlate the various sentences of the rejection with specific claims. The comments that follow are based on applicants' best attempts to match aspects of the rejection to the present set of claims by associating common words or phrases.

B. Claims 1, 3, 10, 15, 26, 35, and 36 stand rejected (as part of the improper omnibus rejection of claims 1-38 discussed in section A. herein) under 35 U.S.C. §103(a) as being unpatentable for obviousness over U.S. Patent No. 5,821,513 to O'Hagan et al. ("O'Hagan") in view of U.S. Patent No. 6,034,379 to Bunte et al. (hereinafter Bunte) and U.S. Patent No. 5,880,452 to Plesko ("Plesko").

Regarding the independent claims, independent claims 1, 3, 10, 15, 26, 35, and 36 recite as follows:

1. (Currently Amended) An optical reader comprising:
a printed circuit board;
a image sensor mounted on said printed circuit board, said image sensor having a field of view, said image sensor adapted to generate an electrical signal representative of the field of view of said image sensor;
a signal processing circuit disposed to receive said electrical signal from said image sensor, said signal processing circuit mounted on said printed circuit board;
an image capture circuit adapted to receive electrical signal from said signal processing circuit and store said electrical signal, said image capture circuit mounted on said printed circuit board;
an image decoding and/or recognition circuit coupled to said image capture circuit, said image decoding circuit mounted on said printed circuit board;
a light source mounted on said printed circuit board, said light source disposed to illuminate at least a portion of the field of view of said image sensor; and
a control circuit coupled to both said image sensor and said light source;
wherein said control circuit is adapted to control the operation of said image sensor; and
wherein said control circuit is adapted to control the operation of said light source.

- 3 (Currently Amended) An optical reader comprising:
a mounting frame, said mounting frame including:
a back plate; and
four sidewalls extending outwards from said back plate;
wherein said back plate and said four side walls define an interior volume; and
wherein said back plate defines a plurality of openings;

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a printed circuit board coupled to said back plate, wherein said printed circuit board is external to said interior volume;

an image sensor mounted on said printed circuit board, said image sensor disposed such that the field of view of said image sensor faces said interior volume;

a light source disposed within said interior volume, said light source mounted on said printed circuit board;

a control circuit for controlling the operation of said image sensor and said light source, said control circuit disposed on said printed circuit board, said control circuit coupled to said light source and said image sensor;

a signal processing circuit disposed to receive an electrical signal from said image sensor, said signal processing circuit mounted on said printed circuit board;

an image capture circuit adapted to receive the electrical signal from said signal processing circuit and store said electrical signal, said image capture circuit mounted on said printed circuit board; and

an image decoding and/or recognition circuit coupled to said image capture circuit, said image decoding circuit mounted on said printed circuit board.

10. (Currently Amended) An optical reader comprising:

a mounting frame, said mounting frame including:

a back plate; and

four sidewalls extending outwards from said back plate;

wherein said back plate and said four side walls define an interior volume; and

wherein said back plate defines a plurality of openings;

a printed circuit board coupled to said back plate, wherein said printed circuit board is external to said interior volume;

an image sensor mounted on said printed circuit board, said image sensor disposed such that the field of view of said image sensor faces said interior volume;

a plurality of light emitting diodes disposed within said interior volume, said plurality of light emitting diodes mounted on said printed circuit board;

a control circuit for controlling the operation of said image sensor and said light source, said control circuit disposed on said printed circuit board, said control circuit coupled to said light source and said image sensor;

a signal processing circuit disposed to receive an electrical signal from said image sensor, said signal processing circuit mounted on said printed circuit board;

an image capture circuit adapted to receive the electrical signal from said signal processing circuit and store said electrical signal, said image capture circuit mounted on said printed circuit board; and

an image decoding and/or recognition circuit coupled to said image capture circuit, said image decoding circuit mounted on said printed circuit board.

15. (Currently Amended) An optical reader comprising:

a mounting frame, said mounting frame including:

a back plate; and

four sidewalls extending outwards from said back plate;

wherein said back plate and said four side walls define an interior volume; and

wherein said back plate defines a plurality of openings;

a printed circuit board coupled to said back plate, wherein said printed circuit board is external to said interior volume;

an image sensor mounted on said printed circuit board, said image sensor disposed such that the field of view of said image sensor faces said interior volume;

a plurality of light emitting diodes disposed within said interior volume, said plurality of light emitting diodes mounted on said printed circuit board;

a control circuit for controlling the operation of said image sensor and said light source, said control circuit disposed on said printed circuit board, said control circuit coupled to said light source and said image sensor;

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a signal processing circuit disposed to receive an electrical signal from said image sensor, said signal processing circuit mounted on said printed circuit board;
an image capture circuit adapted to receive the electrical signal from said signal processing circuit and store said electrical signal, said image capture circuit mounted on said printed circuit board; and
an image decoding and/or recognition circuit coupled to said image capture circuit, said image decoding circuit mounted on said printed circuit board;
wherein the receive axis of said image sensor is substantially perpendicular to said printed circuit board.

26. (Currently Amended) An optical reader comprising:
a mounting frame, said mounting frame including:
a back plate; and
four sidewalls extending outwards from said back plate;
wherein said back plate and said four side walls define an interior volume;
wherein said back plate includes an exterior surface and
wherein said back plate defines a plurality of openings;
a printed circuit board coupled to said external surface;
an image sensor mounted on said printed circuit board, said image sensor disposed such that the field of view of said image sensor faces said interior volume;
a plurality of light emitting diodes disposed within said interior volume, said plurality of light emitting diodes mounted on said printed circuit board;
illumination optics disposed proximate to said plurality of light emitting diodes;
a control circuit for controlling the operation of said image sensor and said light source, said control circuit disposed on said printed circuit board, said control circuit coupled to said light source and said image sensor;
a signal processing circuit disposed to receive an electrical signal from said image sensor, said signal processing circuit mounted on said printed circuit board;
an image capture circuit adapted to receive the electrical signal from said signal processing circuit and store said electrical signal, said image capture circuit mounted on said printed circuit board; and
an image decoding and/or recognition circuit coupled to said image capture circuit, said image decoding circuit mounted on said printed circuit board;
wherein the receive axis of said image sensor is substantially perpendicular to said printed circuit board.

35. (Currently Amended) An optical reader comprising:
a mounting frame, said mounting frame including:
a back plate; and
four sidewalls extending outwards from said back plate;
wherein said back plate and said four side walls define an interior volume; and
wherein said back plate defines a plurality of openings;
a printed circuit board coupled to said external surface;
an image sensor mounted on said printed circuit board, said image sensor disposed such that the field of view of said image sensor faces said interior volume;
imaging optics coupled to said image sensor, said imaging optics at least partially disposed within said interior volume;
at least one illumination light emitting diode coupled to said printed circuit board wherein said at least one illumination light emitting diode is disposed within said interior volume;
at least one aiming light emitting diode coupled to said printed circuit board wherein said at least one aiming light emitting diode is disposed within said interior volume;
an aperture plate disposed proximate to said at least one illumination light emitting diode and said at least one aiming light emitting diode;
a diffuser plate coupled to said mounting frame, wherein said aperture plate is disposed between said aperture plate and said mounting frame, wherein said diffuser plate applies a clamping force to said aperture plate thereby holding said aperture plate in a predetermined position;
a control circuit for controlling the operation of said image sensor and said light source, said control circuit disposed on said printed circuit board, said control circuit coupled to said light source and said image sensor;
a signal processing circuit disposed to receive an electrical signal from said image sensor, said signal processing circuit mounted on said printed circuit board;

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an image capture circuit adapted to receive the electrical signal from said signal processing circuit and store said electrical signal, said image capture circuit mounted on said printed circuit board; and
an image decoding and/or recognition circuit coupled to said image capture circuit, said image decoding circuit mounted on said printed circuit board;
wherein the receive axis of said image sensor is substantially perpendicular to said printed circuit board;
wherein said aperture plate defines at least one opening for allowing light generated by said at least one illumination light emitting diode to pass through; and
wherein said aperture plate defines at least one opening for allowing light generated by said at least one aiming light emitting diode to pass through.

36. (Currently Amended) An optical reader comprising:

a printed circuit board (“PCB”) on which an integrated circuit (“IC”) is mounted, the PCB further comprising printed circuit wiring for receiving electrical connections from at least one component, the at least one component including a source of electrical power, the source of electrical power coupled to the IC;
an image sensor having a field of view, the image sensor adapted to generate an electrical signal representative of the field of view of the image sensor, the image sensor located within the IC;
an analog-to-digital (“A/D”) converter, the A/D converter to digitize the electrical signal from the image sensor, the A/D converter electrically coupled to the image sensor and the A/D converter to convert the electrical signal from the image sensor to a digital signal, the A/D converter located within the IC;
a signal processing circuit electrically coupled to the A/D converter to receive the digital signal from the A/D converter, the signal processing circuit to process the digital signal from the A/D converter and to output a processed digital signal, the signal processing circuit located within the IC;
an image capture circuit including a memory, the image capture circuit electrically coupled to the signal processing circuit and adapted to receive the digital signal from the signal processing circuit and to store the processed digital signal in the memory, the image capture circuit located within the IC;
an image decoding and/or recognition circuit coupled to the IC, the image decoding circuit mounted on the PCB;
a light source mounted on the PCB, the light source to illuminate at least a portion of the field of view of the image sensor; and
a control circuit coupled to the IC and to the light source;
wherein the control circuit is adapted to control the operation of the image sensor in the IC; and
wherein the control circuit is adapted to control the operation of the light source.

A combination of prior art references must teach or suggest all the claim limitations for an obviousness rejection. *In re Royka*, 490 F.2d 981, MPEP §2143.03. As presented in detail in the pages that follow, many claim limitations have not been considered by the Examiner and are not discussed in the one paragraph obviousness rejection. (*Office Action, paragraph 4*). These rejections are believed to be improper as they do not address all of the claim limitations.

Regarding claim 1, at least four of the claim 1 limitations do not appear anywhere in the rejection. Claim 1 calls for a “signal processing circuit”. The rejection does not consider a “signal processing circuit” limitation. Claim 1 also calls for a specifically arranged and featurized “image capture circuit”. The rejection does not consider a specifically arranged and featurized “image capture circuit”. Claim 1 also calls for an “image recognition circuit.” The rejection does not consider an “an image recognition circuit.” Claim 1 also calls for a

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specifically arranged and featurized “control circuit.” The rejection does not consider a “control circuit.” With respect to independent claim 1, the Examiner has not demonstrated, and has not even alleged that the prior art has all of the limitations of the claim. Without an indication of all of the limitations of the claim, an obviousness rejection is improper.

Therefore, applicants respectfully traverse the rejection.

Regarding another important aspect of the instant invention as claimed in claim 1, the components as described above and claimed in claim 1 are mounted on a single printed circuit board. Applicants agree with the Examiner’s previous assertion (*Office Action mailed December 2, 2004*) that “O’Hagan discloses that his elements are mounted on four circuit boards, not a single circuit board.” In fact, O’Hagan actually teaches away from the instant invention by teaching the use of multiple circuit boards.

The Examiner agrees with applicants that O’Hagan and Bunte do not teach all the elements are mounted on a single circuit board. (*Office Action, paragraph 5*). However, the Examiner alleges that Plesko does show this feature. (*Office Action, paragraph 4*). Applicants disagree and also traverse the rejection as related to Plesko. Plesko’s ‘452 patent teaches a miniature beam scanner comprising a laser, micro lens, moving mirror, electromagnetic motion system, and a single photodetector. (*Plesko, col. 6, lines 40-53*). Plesko’s laser scanner is mounted on a printed circuit board within a PCMCIA card. (*Plesko, col. 6, lines 3-10*).

Now turning to FIG. 3, greater detail of the miniature beam scan module 2 is shown. The module 2 consists of a solid state laser assembly 32, a micro lens 34 such as a gradient index (GRIN) lens which is available in sizes on the order of 1 mm diameter, a mirror 38 for directing the beam from the laser to a scan mirror 40 attached to moveable core 45 for directing and scanning the beam out of port 11. A second port 13 allows reflected light to enter optical filter 10 which has photo detector 12 behind it. The scan mirror 40 is part of the inventive ultra thin scan mechanism 52 of FIG. 4A the present invention. It should be noted that mirror 38 is optional in that it merely allows for the specific optical layout described in FIG. 3 but the light beam from the laser could have been aimed directly at mirror 40. (*Plesko, col. 6, lines 40-53*).

Claim 1 of the instant invention calls for an optical reader comprising: a printed circuit board; a image sensor mounted on said printed circuit board, said image sensor having

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a field of view, said image sensor adapted to generate an electrical signal representative of the field of view of said image sensor. The instant invention defines an image sensor as including a 1D or 2D CCD, CMOS, NMOS, PMOS, CID OR CMD solid state image sensor. (*Specification, page 16, lines 6 -10*). The applicants also expressly distinguish an image sensor from a laser scanning system. (*Specification, lines 10-14*). Plesko does not teach or suggest the use of an image sensor. And, Plesko also distinguishes his scanning beam system from an optical reader using an image sensor. Moreover, Plesko does not make any reference to an image sensor beyond a terse negative reference in his Background of the Invention section where Plesko expressly states that components required for a CCD image sensor bar code reader are inherently bulky:

Another category of readers for bar-code and printed matter are the so called CCD types or "Charge Coupled Devices", which use an imaging technique for acquiring data and do not contain lasers but are inherently bulky to be adapted to fit into a card size terminal. Generally, CCD readers must be placed on top of and cover the target bar-code, have poor depth of field and limit the size of bar-codes they can read. (*Plesko, col. 3, lines 25-33*).

At the time of the invention, Plesko would have expressly taught one skilled in the art *away* from using an image sensor on a single board optical reader using an image sensor since according to Plesko; image sensors are inherently bulky and therefore unsuitable for such use. Plesko thus teaches away from O'Hagan and Bunte and cannot properly be combined with either O'Hagan or Bunte for an obviousness rejection.

Regarding independent claims 3, 10, 15, 26, 35, and 36, claims 3, 10, 15, 26, 35, and 36 are believed to be allowable for the same reasons as stated by applicants with regard to claim 1. At least three of the claim 3 limitations do not appear anywhere in the rejection; namely, specifically arranged and featurized "signal processing circuit," "image capture circuit," "control circuit." Claim 15 also calls for a specifically arranged and featurized "back plate" and the rejection does not consider a "back plate." Claim 36 calls for a specifically arranged and featurized signal processing circuit, image capture circuit, control circuit located within an IC on the PCB and the rejection does not consider a signal processing circuit, image capture circuit, control circuit located within an IC on the PCB. With respect to independent claims 1, 3, 10, 15, 26, 35, and 36, the Examiner has not

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demonstrated, and has not even alleged that the prior art has all of the elements of the claims. Without an indication of all of the limitations of the claim, an obviousness rejection is improper. Therefore applicants respectfully traverse these rejections.

Moreover, with respect to claims 3, 10, 15, 26, 35, and 36, the missing limitations and other specifically arranged and featurized components are recited to be disposed on a single common circuit board. As discussed with regard to claim 1, the addition of Plesko to the obviousness rejection does not add the limitation of an image sensor mounted on said printed circuit board and the combination of Plesko with either Bunte or O'Hagan is further believed to be an improper combination. The Examiner is respectfully requested to withdraw the rejection of claims 3, 10, 15, 26, 35, and 36 over the combination of Plesko, O'Hagan, and Bunte.

C. Dependent claims 2, 4-9, 11-14, 16-25, 27-34, and 37-38 also stand rejected (as part of the improper omnibus rejection of claims 1-38 discussed in section A. herein) under 35 U.S.C. §103(a) as being unpatentable for obviousness over U.S. Patent No. 5,821,513 to O'Hagan et al. ("O'Hagan") in view of U.S. Patent No. 6,034,379 to Bunte et al. ("Bunte") and U.S. Patent No. 5,880,452 to Plesko ("Plesko").

Regarding the dependent claims, the dependent claims are believed to be allowable at least for their dependency on the base claim and for the additional combinations of elements they recite. While deficiencies have been noted in the Examiner's rejections of the base claims, deficiencies have been noted with the Examiner's dependent claims rejections as well. Exemplary deficiencies that have been noted with respect to rejections of the dependent claims are outlined herein.

Claims 4 and 11 call for the optical reader further including an optics lens assembly coupled to the back plate. The Examiner cites to O'Hagan's "back" 162, however as seen in Fig. 4 of O'Hagan, back 162 has no utility for coupling to a lens.

Regarding claims 5 and 12, the Examiner does not point out where in the references the elements of a diffuser plate engageable with at least two of said four side walls; and an aiming lens aperture plate disposed between said diffuser plate and said back plate are shown or suggested.

Regarding claims 8 and 13 the Examiner does not point out where in the references the elements of an optical reader wherein said image sensor is a solid state image sensor and said back plate defines a recess for receiving said solid state image sensor are shown or suggested.

Claim 17 calls for the optical reader of claim 16 further comprising a diffuser plate disposed to receive at least a portion of the light emitted from said plurality of light emitting diodes. Claim 18 calls for the optical reader of claim 15 further including a diffuser plate coupled to said mounting frame, wherein said diffuser plate is disposed to receive at least a portion of the light emitted by said plurality of light emitting diodes, and Claim 19 calls for the optical reader of claim 18 further including an aperture plate disposed between said diffuser plate and said plurality of light emitting diodes, wherein said aperture plate restricts the amount of light reaching said diffuser plate from said plurality of light emitting diodes. The Examiner fails to show any of these elements in the references.

Claim 24 calls for an optical reader wherein the horizontal aiming pattern consists of a horizontal line of light. While the Examiner has made a reference to a structure having a crosshair aiming pattern, the Examiner does not demonstrate, or even allege that the prior art has an aiming light emitting diode and an aiming pattern that consists of a horizontal line of light in the specific combinations recited by the applicants.

Claim 33 calls for an aperture plate; and a diffuser plate; wherein the aperture plate includes a plurality of arcuate surfaces; wherein each of the arcuate surfaces includes a surface having compound curvature; and wherein each of the arcuate surfaces defines a

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substantially rectangular aperture. The Examiner fails to show any of these elements in the references.

Claim 34 calls for the optical reader of claim 33 wherein at least two of said four side walls include resilient members adapted for coupling said diffuser plate to said mounting frame. The Examiner fails to demonstrate or even allege that the prior art has the recited elements.

Claim 37 calls for the optical reader of claim 36 wherein the image recognition circuit is located within the IC on the PCB. The Examiner fails to demonstrate or even allege that the prior art has the recited elements.

Claim 38 calls for the optical reader of claim 36 wherein the control circuit is located within the IC on the PCB. The Examiner fails to demonstrate or even allege that the prior art has the recited elements.

The Examiner has shown none of the structures as described above in any of O'Hagan, Bunte, or Plesko. Therefore, neither O'Hagan, Bunte, nor Plesko render these claims obvious.

When a rejection is made based on obviousness and a reference is complex and shows or describes inventions other than that claimed by the applicant, *the particular part of the reference relied upon must be designated as nearly as practicable. (emphasis added)* 37 C.F.R. §1.104(c)(2). The Examiner relies on the alleged teachings of Bunte, O'Hagan or Plesko relating to the claim limitations listed immediately above; yet, contrary to the express provisions of 37 C.F.R. §1.104(c)(2) makes no effort to specifically designate the purported section of Bunte or O'Hagan or Plesko relating to this partial list of missing limitations.

If the Examiner wishes to continue this rejection of each of the dependent claims, the Examiner is respectfully requested to specifically point out the sections of Bunte or O'Hagan

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or Plesko, alleged to be present, relating to the cited limitations. If the Examiner cannot designate such a teaching in Bunte or O'Hagan or Plesko, the Examiner is respectfully requested to withdraw the rejection of these claims over the combination of O'Hagan and Bunte and Plesko.

At the end of the improper omnibus rejection, the Examiner continues to assert that mounting fingers and recesses and alignment means are well known.

Mounting "fingers" remain old and well known, as are "recesses" and alignment means in electronic equipment enclosing circuit boards. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the board of O'Hagan using mounting "fingers" and providing "recesses" for alignment in the housing of O'Hagan. This would reduce the cost of mounting while providing for a physically secure package.

In response to applicants' demand to substantiate with documentary evidence regarding this part of the rejection as unsatisfactory "official notice," the Examiner has proffered only an exemplary reference to electronic contact fingers and has provided no supporting materials or affidavits with regard to recesses or alignment means. Applicants maintain the request to substantiate, with reference to documentary evidence, the finding that recesses and alignment means in electronic equipment enclosing circuit boards are well known in the art. If the Examiner cannot find such documentary evidence or respond in some manner per the requirements under MPEP §2144.03, it is respectfully suggested that the rejection with regard to official notice be withdrawn.

In addition to the above, applicants add dependent claims 39 and 40. Dependent claims 39 and 40 are believed to be allowable based on their dependency on an allowable base claim and for the additional combinations of elements they recite. Also, applicants broaden the "recognition circuit" element of the claims to the broader term "decoding and/or recognition circuit." The broadening of the recognition term does not alter the applicants' position that all claims are allowable.

While the applicants have demonstrated that the standing rejections of several claims are improperly made, the lack of discussion by applicants as to certain of the claims will not be taken as an indication that the applicants agree with the rejections of those claims not discussed. Further, while applicants have not yet argued that the Examiner's purported combination of reference teachings are improper, applicants may present such arguments in the future.

Also, while specific claim elements have been discussed for purposes of demonstrating examples of deficiencies with the Examiner's Office Action, the applicants' reference to specific claim elements will not be taken as an indication that the Applicants have taken the position, in asserting an argument of patentability, that a particular highlighted element constitutes a sole basis for patentability of a claim out of the context of the various remaining combinations of elements recited in the claim.

D. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The Examiner cites to the combination O'Hagan, Bunte, and Plesko as rendering claims 1-38 obvious and then simply makes a conclusory statement in paragraph 4 that "It would have been obvious to one of ordinary skill in the art" to combine the references. The Examiner offers no indication of any suggestion, teaching, or motivation in either of the references that would cause one skilled in the art to combine them. In fact in applicants' remarks herein, applicants have shown that Plesko expressly teaches away from Bunte and O'Hagan.

2. Conclusion

Applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. The Examiner has not shown a combination of references that discloses all of the limitations of any of the claims nor has the Examiner indicated why the cited references should be combined to support such an obviousness rejection. Applicants respectfully request reconsideration of the pending claims

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1-38 and a prompt Notice of Allowance thereon. In the alternative, applicants request a clarification of all §103 (a) rejections in accordance with standard MPEP patent practice.

Applicants believe that no extension of time is necessary to make this Response timely. Should applicants be in error, applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. §1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account No. 50-0289.

Respectfully submitted,

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